(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/078438 A3

(51) International Patent Classification[7]: G01N 21/64, 33/53

(21) International Application Number:
PCT/FI2005/050028

(22) International Filing Date:
11 February 2005 (11.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/544,197 13 February 2004 (13.02.2004) US
20040236 13 February 2004 (13.02.2004) FI

(71) Applicant *(for all designated States except US)*: **ARCTIC DIAGNOSTICS OY** [FI/FI]; P.O. Box 51, FI-20521 Turku (FI).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SOINI, Erkki** [FI/FI]; Krypingintie 20, FI-21610 Kirjala (FI). **SOINI, Aleksi** [FI/FI]; Jalaskuja 4, FI-21420 Lieto (FI). **SOINI, Juhani** [FI/FI]; Vartiovuorenkatu 5 as. 4, FI-20700 Turku (FI). **MELTOLA, Niko** [FI/FI]; Sorvakuja 1, FI-20760 Piispanristi (FI).

(74) Agent: **TURUN PATENTTITOIMISTO OY**; P.O. Box 99, FI-20521 Turku (FI).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,*

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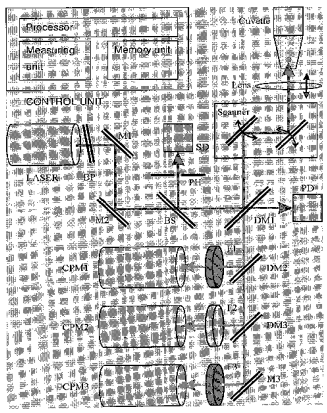
(54) Title: USE OF TWO-PHOTON EXCITED FLUORESCENCE IN ASSAYS OF CLINICAL CHEMISTRY ANALYTES



(57) Abstract: The invention relates to an in vitro diagnostic method for quantification of a clinical chemistry analyte from a clinical sample wherein the clinical chemistry analyte undergoes a chemical reaction or reactions with a reagent or reagents in one or several steps, or in a reaction sequence, or catalyses a chemical reaction, or reactions, or a reaction in a reaction sequence of a reagent or reagents, in one or several steps, in a reaction system. The reaction or reactions or reaction sequence result in a change of a measurable property of a compound or compounds of said reaction or reactions or reaction sequence. Characteristic for the method is that said chemical reaction or reactions or reaction sequence results in formation of a two-photon fluorescent compound, or a change in two-photon fluorescence properties of the reaction system comprising at least one two-photon fluorescent compound, and the analyte is quantified by exciting said two-photon fluorescent compound or compounds and measuring two-photon excited fluorescence, and relating said measured fluorescence to method standardization data based on measurements obtained from reference material of said analyte.

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PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

Published:

— *with international search report*

(88) Date of publication of the international search report:
13 October 2005

(48) Date of publication of this corrected version:
2 March 2006

(15) Information about Correction:
see PCT Gazette No. 09/2006 of 2 March 2006, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.